
DEPARTMENT OF THE INTERIOR**Fish and Wildlife Service****50 CFR Part 17****Endangered and Threatened Wildlife and Plants; Proposed Endangered Status for the Population of Woodland Caribou Found in Washington, Idaho, and Southern British Columbia**

AGENCY: Fish and Wildlife Service, Interior.

ACTION: Proposed rule.

SUMMARY: The Service proposes to determine as Endangered the population of woodland caribou (*Rangifer tarandus caribou*), sometimes known as the southern Selkirk Mountain herd, found in extreme northeastern Washington, northern Idaho, and southern British Columbia. This isolated herd is the only population of caribou that still regularly occurs in the conterminous United States. The population has fallen to only 13 to 20 individuals, a level that probably cannot sustain the herd much longer. At least one or two adults and subadults are being lost each year, calf survival is apparently low, and there is evidently no immigration from other herds in Canada. The population is jeopardized by such factors as poaching, habitat loss to timber harvesting and wildfires, collisions with motor vehicles, and genetic problems through inbreeding. The premature death of even one more animal could mean the difference between survival and extinction for the herd. The population has already been listed as Endangered through an emergency rule, but that rule will expire on September 12, 1983, and permanent protection by the Endangered Species Act is now required.

DATES: Comments from the public and the States of Idaho and Washington must be received by August 22, 1983. Public hearing requests must be received by August 8, 1983.

ADDRESSES: Comments and materials concerning this proposal should be sent to the Regional Director, U.S. Fish and Wildlife Service, Lloyd 500 Bldg., Suite 1692, 500 N.E. Multnomah Street, Portland, Oregon 97232. Comments and materials received will be available for public inspection by appointment during normal business hours at the Service's

Idaho Field Station, 4620 Overland Road, Room 209, Boise, Idaho 83705.

FOR FURTHER INFORMATION CONTACT:

Mr. Sanford R. Wilbur, U.S. Fish and Wildlife Service, Lloyd 500 Building, Suite 1692, 500 Northeast Multnomah Street, Portland, Oregon 97232 (503/231-6131 or FTS 429-6131).

SUPPLEMENTARY INFORMATION:**Background**

According to the most recent taxonomic work (Banfield, 1961; Hall, 1981), the reindeer of Eurasia and the caribou of North America belong to a single species, *Rangifer tarandus*. The species is divided into a number of subspecies, among which is the woodland caribou *Rangifer tarandus caribou*. This subspecies once occupied nearly the entire forested region from southeastern Alaska and British Columbia to Newfoundland and Nova Scotia. In the 48 conterminous States of the United States, populations are known to have occurred in Washington, Idaho, Montana, Minnesota, Wisconsin, Michigan, Vermont, New Hampshire, and Maine. Largely because of killing and habitat alteration by people, indigenous caribou disappeared from New England by about 1908 and from the Great Lakes States by 1940. A few individuals, probably wanderers from Canada, were observed in northeastern Minnesota in 1980-1981 (Mech, Nelson, and Drabik, 1982). There had been no recorded sightings in Montana since 1971, but in 1981, a lone animal was reportedly seen in the northwestern part of the State (Chadwick, 1982). This animal was probably also a wanderer from Canada and not a member of the herd that is the subject of this proposal. There are still substantial numbers of woodland caribou in Canada, though populations there have been generally declining.

The only caribou population that still regularly occupies the conterminous United States is found in northern Idaho and northeastern Washington. This population, sometimes called the southern Selkirk Mountain herd, also occurs in southern British Columbia. The total approximate area of utilization is bounded as follows: starting at the point where the Columbia River crosses the Washington-British Columbia border; thence northward along the Columbia River to its confluence with the Kootenay River in British Columbia; thence northeastward along the Kootenay River to its confluence with Kootenay Lake; thence southward along Kootenay Lake and the Kootenay River, and across the Idaho-British

Columbia border, to the town of Bonners Ferry, Idaho; thence southward along U.S. Highway 95 to the Pend Oreille River, thence westward and northward along the Pend Oreille River, and across the Idaho-Washington State Line, to the Washington-British Columbia border; thence westward along the Washington-British Columbia border to the point of beginning. Any caribou within these boundaries are considered a part of the population which this proposal would classify as Endangered. It is possible, however, that portions of the herd may on occasion be found outside these geographical limits.

Early records suggest that in the 19th century, caribou were plentiful in the mountains of northeastern Washington, northern Idaho, northwestern Montana, and adjacent parts of southwestern Canada. As in the case of other big game animals of North America, unrestricted hunting probably led to a major reduction of caribou numbers in this region by 1900. From that time until fairly recently, the numerical status of the southern Selkirk herd was not completely clear. Freddy (1974) thought that this herd probably contained fewer than 50 animals after 1900. Flinn (1956) and Evans (1960), however, estimated that there were still about 100 individuals in the population during the 1950s. In any event, there has been a sharp decline in recent decades, since estimates in the 1970s were about 20 to 30 caribou in the herd, and the latest data indicate a count of only 13 to 20.

In addition to the factors listed below, the decline and continued low numbers of the southern Selkirk herd apparently result from low calf survival and absence of immigration from other herds. The only source for immigrants is British Columbia, but there has been a general decline in woodland caribou in that province (British Columbia Ministry of Environment, 1981). Moreover, the southern Selkirk herd is separated from other herds by barriers, such as Kootenay Lake and the human settlements in Kootenay Valley, and by substantial distance. The nearest herd is about 30 miles away, on the east side of Kootenay Lake in southeastern British Columbia; it contains about 40 animals (Guy Woods, British Columbia Fish and Wildlife Branch, Ministry of Environment, Nelson, British Columbia, pers. comm.).

It now appears that the southern Selkirk Mountain population of woodland caribou has become the most critically endangered mammal in the United States. In the *Federal Register* of February 9, 1981 (46 FR 11567-11568), the Service published a notice accepting

two petitions to add the population to the U.S. list of Endangered and Threatened Wildlife, and announced its intention to issue a proposal to this effect. At that time, the population was estimated to contain 20 to 30 individuals, about the same as during the previous decade.

Since the notice was published, evidence has accumulated that the status of the southern Selkirk herd has deteriorated badly. The latest field data indicate an actual count of only 13 individuals of all ages in the herd, though there may be a few more animals that were not counted. Such a population size is far below the minimum necessary to insure survival in the face of natural contingencies, even disregarding the host of human-caused problems described below. Moreover, small population size, along with lack of genetic exchange with other populations leads to inbreeding. This factor reduces adaptiveness, viability, and fecundity, and may result in extinction. Recent studies suggest that the minimum genetically effective size of a population of large mammals is 50 individuals (Franklin, 1980; Soule, 1980). Other studies have shown that inbreeding in populations of various species of hoofed mammals, including *Rangifer tarandus*, is associated with a significant increase in juvenile mortality (Ralls, Brugger, and Ballou, 1979). Such a condition could be responsible for low calf survival in the southern Selkirk population.

Additional losses, even the premature death of a single animal, could be disastrous, and yet the potential for such losses is great and increasing. Habitat disruption is continuing without full consideration of the needs of the caribou. Poaching occurs regularly; in the most recent known case, a mature female was shot on the Canadian side of the border in October 1982. Existing regulations have not been effective in either stopping poaching or preventing serious habitat disturbance. Roads continue to be constructed in caribou range, allowing greater access for hunters and setting up possible collisions between vehicles and caribou. Johnson (1976) suggested that a single accident along an icy winter road, where the caribou have gathered to feed on salt, could wipe out a significant part of the herd.

Any of these problems could at any time result in losses that would be irreversible and reduce the herd to a point at which recovery is no longer feasible. With respect to these problems, the Service considered it necessary to immediately implement all available protective measures and to begin full-

scale recovery planning. Therefore, an emergency determination of Endangered status for the southern Selkirk caribou population was issued in the *Federal Register* of January 14, 1983 (48 FR 1722-1726). That emergency rule will remain in effect until September 12, 1983. The Service is now proposing permanent Endangered status for the caribou population.

Factors Affecting the Species

Section 4(a)(1) of the Endangered Species Act (16 U.S.C. 1531 *et seq.*) and regulations promulgated to implement the listing provisions of the Act (codified at 50 CFR Part 424; under revision to accommodate 1982 amendments) set forth the procedures for adding species to the Federal list. The Secretary of the Interior shall determine whether any species is an Endangered Species or a Threatened Species due to one or more of the five factors described in Section 4(a)(1) of the Act. These factors, and their application to the southern Selkirk Mountain population of woodland caribou, are as follows:

A. *The present or threatened destruction, modification, or curtailment of its habitat or range.* Surveys conducted in the 1950s found about 50-100 woodland caribou in the southern Selkirk population. Since then, the number has declined to 13-20 animals. The downward trend was caused, in part, by past logging practices (including road construction) in the caribou's range.

Timber cutting can potentially affect caribou habitat by eliminating escape cover, migration corridors, and lichen production. Food availability is probably not now limiting this caribou population. However, if the population is to be restored to a viable level, estimated by the Forest Service to be about 100 animals, the production of lichens, the primary winter food, would probably have to increase. Timber management strategies would have to be developed which provide timber stands that optimize lichen production.

Currently, the U.S. Forest Service is utilizing caribou management guidelines to design timber sales in caribou habitat. These guidelines are intended to minimize the effects of logging on caribou and also to develop silvicultural prescriptions which may enhance habitat over the long run. Disease and insects, especially spruce bark beetles, are presently impacting timber stands within historic caribou habitat, thereby further complicating management. Salvage sales have taken place and others are planned to remove much of the diseased timber and reduce the

spread of bark beetles. Although these sales are being designed utilizing the caribou guidelines, studies and monitoring are necessary to evaluate the actual response of the caribou. Timber harvesting may prove helpful in portions of caribou habitat by providing food and cover necessary for the survival of this population. For example, if caribou numbers eventually are limited by lack of food, and if selective tree removal could improve lichen production and availability, then moderate timber harvesting could be beneficial. However, at this time more information is necessary on the response of caribou to timber harvesting and managed timber stands. Current studies may indicate the need for a modification of the guidelines to provide for conservation and recovery. Timber harvesting, if not properly designed, can significantly impact caribou, especially in conjunction with the effects of poaching, highways, and forest roads. Listing of the caribou would place a higher priority on the acquisition of research funds to study caribou-timber management relationships.

Wildfire is a natural phenomenon in the range of the caribou. In the past, wildfire sometimes destroyed caribou cover and winter food. The caribou historically tolerated this natural adverse impact by itself. However, the cumulative effects of logging and wildfire have eliminated a great deal of the southern Selkirk herd's habitat.

B. Overutilization for commercial, recreational, scientific, or educational purposes. An important cause of the decline of the southern Selkirk caribou herd is human killing, both legal hunting (prior to 1957) and poaching (now and in the past). Caribou are relatively easy for hunters to approach and shoot. Poachers killed at least one animal from this population in 1980, 1981, and 1982 (B. S. Summerfield, U.S. Forest Service, Bonners Ferry, Idaho, pers. comm.).

Poaching losses also occurred in previous years. The problem is greatest where the caribou frequent areas with good road access for hunters, for example, near Trans-Canada Highway No. 3. There are even more roads in the portion of the herd's range in the United States, and the potential for poaching is thus greater there. Fortunately, in the past decade, the herd has spent less time in the United States than in Canada. Had the reverse been true, U.S. caribou poachers might already have eliminated the herd. Finally, there is the possibility that licensed deer and elk hunters could accidentally shoot a caribou.

C. Disease or predation. Disease is not known to significantly impact this

caribou population. Certain predators, such as the coyote and black bear, occur in moderate numbers in the range of the herd. They are capable of killing caribou calves and may occasionally do so. Other predators, including the gray wolf, grizzly bear, and mountain lion, are at such low numbers as to have no significant effect on the caribou. Recovery of wolf and grizzly populations (both on the U.S. List of Endangered and Threatened Wildlife) would probably not jeopardize the caribou population, if caribou habitat is preserved and restored.

D. Inadequacy of existing regulatory mechanisms. Although hunting of the southern Selkirk caribou is prohibited under the laws of Idaho, Washington, and British Columbia, poaching has continued. Such laws also can do little to prevent habitat disruption.

E. Other natural or manmade factors affecting its continued existence. Two other factors affect the abundance of this population. Occasionally caribou are killed in collisions with vehicles along Trans-Canada Highway No. 3 at Kootenay Pass, about 5 miles north of the international boundary. Although no highways exist in the U.S. portion of the population's primary habitat, there is potential for caribou-vehicle collisions in caribou habitat on U.S. Forest Service roads used by loggers, miners, and recreationists. Vehicle collisions with deer are known to occur on these roads, so it is reasonable to assume that caribou collisions could occur too. As the number of forest roads and subsequent traffic increases, the threat to caribou of such collisions will increase.

In addition, caribou are by nature wandering animals. Where there are viable caribou herds, a few individuals migrate from one herd to another each year. This tends to equalize caribou "pressure" on the habitat and allows for genetic interchange between herds. As noted above, however, immigration to the southern Selkirk population is apparently not occurring, and the number of caribou in herds closest to the southern Selkirk population is declining. The lack of natural augmentation to the population causes the herd to rely on inbreeding for recruitment and reduces the genetic variability of the offspring. Reduced genetic variability reduces the capacity of animals to adjust to changing environmental conditions and results in less vigorous individuals.

Critical Habitat

Section 4(a)(3) of the Endangered Species Act requires the Service to designate the Critical Habitat of a species, concurrent with listing, "to the

maximum extent prudent and determinable." In the case of the southern Selkirk Mountain herd of woodland caribou, the Service considers that the designation of Critical Habitat is not prudent. Such a designation would require publication and extensive publicity of the precise areas occupied by the herd and the kind of habitat utilized. There thus would be a serious risk of facilitating poaching. As the loss of even a single animal could be disastrous to the herd, this risk should be avoided.

Effects of This Rule

Endangered species regulations already published in Title 50, § 17.21, of the Code of Federal Regulations set forth a series of general prohibitions and exceptions which apply to all Endangered wildlife. These prohibitions, in part, would make it illegal for any person subject to the jurisdiction of the United States to take, import or export, ship in interstate commerce in the course of commercial activity, or sell or offer for sale any member of the southern Selkirk population of woodland caribou in interstate or foreign commerce. It also would be illegal to possess, sell, deliver, carry, transport, or ship any such wildlife which was illegally taken. Certain exceptions would apply to agents of the U.S. Fish and Wildlife Service and State conservation agencies.

Permits may be issued to carry out otherwise prohibited activities involving Endangered wildlife under certain circumstances. Regulations governing such permits are codified at 50 CFR 17.22 and 17.23. Such permits are available for scientific purposes or to enhance the propagation or survival of the species or population. In some instances, permits may be issued during a specified period of time to relieve undue economic hardship which would be suffered if such relief were not available.

Subsection 7(a) of the Endangered Species Act, as amended, requires Federal agencies to evaluate their actions with respect to any species that is proposed or listed as Endangered or Threatened. This proposed rule requires Federal agencies to satisfy certain statutory obligations relative to the southern Selkirk Mountain population of caribou. Agencies are required by Section 7(a)(4) of the Act to confer with the Service on any action that is likely to jeopardize this population. If the population is added to the list of Endangered and Threatened Wildlife, Federal agencies will be immediately required to insure that the actions they

authorize, fund, or carry out are not likely to jeopardize the continued existence of the population (this requirement is already in effect through the emergency rule of January 14, 1983).

Listing the southern Selkirk caribou as Endangered would increase the management emphasis that agencies place on the population. Listing would further emphasize the national significance of this population. The combination of legal requirements and increased national awareness would produce a number of advantages for the caribou.

First, as indicated above, all Federal actions that may affect the caribou population would come under the purview of the Endangered Species Act. Since most of the range of the population in the United States is within national forests, and since logging activities therein are having impacts on caribou habitat, it is anticipated that some actions authorized, funded, and carried out by the U.S. Forest Service would be affected by this rule. Such effects should not be major, however, since the Forest Service is already attempting to manage its lands with consideration of the caribou's welfare. The emphasis of timber harvesting may have to be shifted from caribou habitat to other areas, and some inconvenience could result, but there should be no substantial effect on timber production. Moreover, this rule would direct the actions of other agencies on national forests towards caribou preservation, and give the Forest Service a greater capability than it now has to manage habitat for the benefit of the caribou. For example, the Forest Service has minimal legal control over its own lands with respect to construction of power lines by the Bonneville Power Administration, and the issuance of permits and leases for mineral development by the Bureau of Land Management. Henceforth, such actions would require consultation with the Fish and Wildlife Service to insure that they are not likely to jeopardize the caribou population.

Second, listing the caribou as Endangered would bring Section 6 of the Endangered Species Act into effect. Therefore, the Fish and Wildlife Service would be able to grant funds (if they become available under existing budgetary constraints) to the States of Idaho and Washington for management actions aiding the protection and recovery of the caribou.

Third, the agents of the Service's Division of Law Enforcement could be assigned to enforce the Act's prohibitions against taking. A law enforcement strategy plan could be developed. Without such protection,

these agents could only be used if any illegally taken carcass or its parts were transferred in interstate or foreign transportation or commerce.

Fourth, listing the population would provide for the development of a caribou recovery plan. Such a plan would draw together agencies (U.S. and Canadian) having responsibility for caribou conservation. The plan would establish an administrative framework, sanctioned by the Act, for agencies to coordinate activities and cooperate with each other in conservation efforts. The plan would set recovery priorities and estimate the cost of various tasks necessary to accomplish them. It would assign appropriate functions to each agency and a timeframe within which to complete them. The plan would establish a formal blueprint for periodic task review. Each agency may now have its own program for caribou management. These programs would be consolidated and modified into one overall recovery plan that would give consideration to all factors needed for caribou conservation.

Fifth, the U.S. State Department could become involved on behalf of the Fish and Wildlife Service. For example, the State Department could encourage Canadian law enforcement agencies to improve surveillance for poachers seeking caribou in the southern Selkirk population. In addition, the State Department could help to encourage Canadian and provincial government agencies to give special consideration to this caribou population when they propose dams, highways, timber sales, etc. in the Canadian part of the range of the population.

National Environmental Policy Act

A draft environmental assessment has been prepared in conjunction with this proposal. It is on file in the Endangered Species Office, U.S. Fish and Wildlife Service, Room 209, 4620 Overland Road, Boise, Idaho 83705, and may be examined by appointment during regular business hours. A determination will be made at the time of a final rule as to whether this is a major Federal action that would significantly affect the quality of the human environment within the meaning of Section 102(2)(C) of the National Environmental Policy Act of 1969 [implemented at 40 CFR Parts 1500-1508].

Public Comments Solicited

The Service intends that the rules finally adopted will be as accurate and effective as possible in the conservation of any Endangered or Threatened species. Therefore, any comments or suggestions from the public, other

concerned governmental agencies, the scientific community, industry, private interests, or any other interested party concerning any aspect of these proposed rules are hereby solicited. Comments particularly are sought concerning:

(1) biological or other relevant data concerning any threat (or the lack thereof) to the population of woodland caribou in Idaho, Washington, and southern British Columbia;

(2) the location of any additional populations of woodland caribou in the conterminous United States, and the reasons why any habitat of this species should or should not be determined to be Critical Habitat as provided by Section 4 of the Act;

(3) additional information concerning the range and distribution of this species; and

(4) current or planned activities in the subject area.

Final promulgation of the regulation on this population of woodland caribou will take into consideration the comments and any additional information received by the Service, and such communications may lead to a final regulation that differs from this proposal.

The Endangered Species Act provides for a public hearing on this proposal, if requested. Requests must be filed within 45 days of the date of the proposal. Such requests should be made in writing and addressed to the Regional Director, U.S. Fish and Wildlife Service, Lloyd 500 Building, Suite 1692, 500 Northeast Multnomah Street, Portland, Oregon 97232 (503/231-6131 or FTS 429-6131).

Author

The primary author of this proposed rule is James A. Nee, U.S. Fish and Wildlife Service, 4620 Overland Road, Room 209, Boise, Idaho 83705.

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List of Subjects in 50 CFR Part 17

Endangered and threatened wildlife, fish, Marine mammals, Plants (agriculture).

Proposed Regulation Promulgation

PART 17—[AMENDED]

Accordingly, it is hereby proposed to amend Part 17, Subchapter B of Chapter I Title 50 of the U.S. Code of Federal Regulations, as set forth below.

1. The authority citation for Part 17 reads as follows:

Authority: Pub. L. 83-205, 87 Stat. 884; Pub. L. 95-632, 92 Stat. 3751; Pub. L. 96-159, 93 Stat. 1225; Pub. L. 97-304, 96 Stat. 1411 (16 U.S.C. 1531, *et seq.*).

2. It is proposed to amend § 17.11(h) by adding the following, in alphabetical order, to the list of Endangered and Threatened Wildlife under mammals:

§17.11 Endangered and threatened wildlife.

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(h) * * *

Species		Historic range	Vertebrate population where endangered or threatened	Status	When listed	Critical habitat	Special rules
Common name	Scientific name						
Caribou woodland.....	<i>Rangifer tarandus caribou</i>	Canada, U.S.A. (AK, ID, ME, MI, MN, MT, NH, VT, WA, WI).	Canada (that part of south-eastern British Columbia bound by the Canada-U.S.A. border, Columbia River, Kootenay River, Kootenay Lake, and Kootenay River), U.S.A. (ID, WA).	E.....		N/A.....	N/A.....

Dated: May 19, 1983.

G. Ray Arnett,

Assistant Secretary for Fish and Wildlife and Parks.

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